ADDRESS ALL COMMUNICATIONS TO
"CHIEF, BUREAU OF SOILS."

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS,
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

C+a

January 22, 1912.

Captain W. C. Crandall,
San Diego, California,

Dear Crandall:-

I have delayed answering your letter for several days hoping to be able to give positive information about what Congress is likely to do for us. This is the open season for bad rumors, and the current report is that they are going to do us very badly. However, I have hopes that we are going to get enough support to make it practicable for us to go on with the work next summer and I am much interested in your plans.

I am inclined to agree with you that it would be best to start at Seattle and work south, and that you would probably want a different boat from the Agassiz. Also, I think that we can manage the maps better if you will indicate to us what maps you want and we can have them enlarged or anything else that you want done to them, and have them mounted on linen in convenient form for work in the field. Besides your work from Point Conception to Point Loma and Rigg's work in Puget Sound, we have maps of the kelp made by Prof. McFarland from San Francisco Bay down to Point

Sur. It may be desirable for you to go over this region during the coming summer, as McFarland mapped by variety rather than by extent or thickness of the beds, but perhaps after you have gone over the maps you may feel that this is not worth while. In any event, I am of the opinion that it would be best for you to start at Cape Flattery and work south. I am very glad that President Hardy is agreeable to our plans, even though they may be tentative because we have no definite idea of what Congress is going to do. The report of our last year's work will be published about February 10, and as soon as I can get hold of a copy I will send you one so that we can discuss the situation more intelligently. I have this morning received a letter from Firman of the C. C. Company in which he tells me that they are expecting to put up a series of factories along the Pacific Coast and are being capitalized at $300,000, which sounds encouraging indeed, I have also had a letter a week or 10 days ago from Mr. Balch, who seemed to feel that we are unduly neglecting him, and I wrote him quite a full letter.

Please give my respects to Dr. Ritter and Mr. Hardy, and tell them that I remember my visit with great pleasure and hope to be able to renew it before very long. We are extremely pushed with work here this winter, but on the whole I am

Crandall:----

very hopeful that things are going to turn out well for the work and will keep you posted as fast as there are any real developments. Please let me hear from you from time to time.

Sincerely,

Frank K Cameron

In Charge.

ADDRESS ALL COMMUNICATIONS TO
"CHIEF, BUREAU OF SOILS."

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS,
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

C+a

Tuesday, February 6, 1912.

Captain W. C. Crandall,
San Diego, California,

Dear Crandall:-

The Agricultural Bill has been reported to the House, and carries an appropriation which will enable us to go ahead with our proposed work on kelp. Of course the report of the Bill is quite a long way from its being passed and signed, but past experience justifies the expectation that there will be no material change, at least no reduction in the Item as reported from the House Committee, so that we are justified in going ahead and preparing our plans. I want to suggest the following outline to you for your consideration:

In the first place we will have Rigg go to Alaska, starting in at Kodiak to map the Nereocystis beds in that section of the coast, which I have learned recently from residents in that section are very extensive and heavy. I propose that you come on our force as a temporary expert on May 15 at a compensation of $200 per month, your

Crandall:---

appointment to run for five months or until October 15. As soon after May 15 as practicable it is suggested that you start at Cape Flattery and work south, doing as much of the coast as is possible and preferably all of it down to the point where you left off last summer. I imagine that you will want to be on the water about 90 days, or thereabouts, and will want to have a seaworthy, serviceable boat with crew, including a man and dory to carry you about the beds. About the details of the work I am not altogether clear, as you may find it desirable, part of the time, to work from the shore. However, this is your business and you will have to work it out for yourself. I have been trying to get estimates of what a proper boat, including of course your subsistence on board, would be, and these estimates vary very much, but apparently it would be in the neighborhood of $40 or $50 a day. If you have to pay as much as this and keep the boat for 90 days, I am doubtful of the possibility of employing a second scientific man to go with you unless you can get some young but competent student who would be will-

Crandall:---

ing to go with you for a very small honorarium and the experience. This is a matter which we are inclined to leave to you for suggestion. The details of employing a boat might be along one of two lines. Either you could hire the boat yourself, paying all expenses and submitting proper vouchers concerning which our financial clerk will advise you and you will be refunded in due course of time, about a month after each of your monthly accounts is submitted; or second, and preferably, you can make the arrangement with the Captain of the boat merely as our agent and he can submit his vouchers on regular forms which we will provide and which will be approved by you to the effect that the service has actually been rendered, and the Captain will be paid by check on the Treasury of this Department. This latter scheme has many advantages both from your point of view and ours, but it means that the Captain of the boat will be several weeks, probably about three, waiting for his money after his vouchers are sent in, as it takes a little time to adjust the necessary

Crandall:---

forms and to get the voucher in from the field and the check back to the Boatman. Of course when you are away from the boat in travelling to and fro while on duty for the Bureau, you get your regular travelling expenses and subsistence, the latter, according to the fiscal regulations, being confined to a sum not exceeding $5 per day.

I have sent for copies of all the Coast and Geodetic Survey maps along the Pacific Coast, and it is my idea that we will take a set of these maps and readjust them to a common scale by photographing them and mounting them, so that you can carry them conveniently and draw in your field maps as you go along. This will greatly facilitate the work and be a decided point in advance of your facilities for last year. I presume it will be necessary for you to have on hand in starting out to work about $300 or $400 in cash, because as you are probably aware, Uncle Sam pays his debts and is quite willing to refund money expended on his account when the proper knots are tied in the red tape, but never advances money.

Crandall:---

This is a handicap that we all are subject to in working for the Government.

I expect the report of the potash work, with the accompanying maps on the kelp groves to be ready for distribution about the end of this week, and at the earliest possible moment I will send you a copy. The interest in the kelp work continues to grow, and I feel strongly that we have an opportunity to do very good work this coming summer, and am counting on you especially to do one of the particularly bright "stunts" in the game.

Please present my compliments to Prof. and Mrs. Ritter, Prof. Hardy, and our other mutual friends, and write me, as soon as you have had an opportunity to think this matter over, what your ideas are, and what you think had best be done in the matter.

Sincerely,

Frank R. Cameron

In Charge.

If you can conveniently find time, it might be well to call on Mr. Balch. I fear the old gentleman thinks we have forgotten to give him proper credit and appreciation. The contrary is the fact. I have heard from Fiorini that the cap vote of the 3 C's has been increased to $300 000. How about it?

ADDRESS ALL COMMUNICATIONS TO
"CHIEF, BUREAU OF SOILS."

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS,
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

c+a

February 21, 1912.

Captain W. C. Crandall,
San Diego, California,

Dear Captain Crandall:-

Today I am sending you copies of the United States Geodetic Survey Charts of the Coast from Cape Flattery to San Diego, or thereabouts, with the idea that they may be helpful to you in formulating your plans. In glancing over the maps, I see that some of them show a very high grade of kelp alont the northern California and Oregon coast. As soon as I am able to get hopd of a copy of our last year's report I will send it to you and will then want your opinion as to the best scale on which to prepare field maps by photographing from the maps which I am sending you today. I have thought that a series of working maps on a scale of 4 inches to the mile would be most satisfactory, but have not come to any definite conclusion, and would like to have your opinion on this.

The appropriation Bill has not been discussed in the House yet, and it is therefore unwise for us to definitely commit ourselves

Crandall:----

to any business arrangement, but as I have written you, there is no good reason to imagine that the Bill will carry any less than was passed by the House Committee, so that it is entirely proper for us to at least tentatively formulate our plans for the coming season's work.

I had an interesting letter from Professor Ritter about a week ago and have written to him, and I would be glad for you to tell him that I am anxious to do anything I can to get together on the coming year's work, and will be glad to have any advice you and he can give us.

Yours sincerely,

Frank R. Cameron

In Charge

EDWIN B. SMITH O. J. BEYFUSS

C. BEYFUSS CO.
244 CALIFORNIA STREET
TELEPHONES { DOUGLAS 4371
HOME C 6378

CODES:
WATKINS, 1881, AND APPENDIX, 1884
WESTERN UNION A 1

CABLE ADDRESS:
"BEYFUSS"

SAN FRANCISCO, CAL., March 19, 1912.

Prof. W. E. Ritter,
East Hall,
Berkeley, Cal.

Dear Sir:

We have not been able as yet to get a figure from Capt. Goodall who owns the "LUCERO" but expect to in a few days.

We are also working on another vessel of the same class and should be able to give you some information inside of a week.

It is not so much the getting of a vessel but to locate one in which your party will be comfortable and we expect to do this for you shortly now. Will write as soon as we get news for you.

Very Truly,
C. BEYFUSS CO.

By A. J. Meyer

EDWIN B. SMITH O. J. BEYFUSS

C. BEYFUSS CO.
244 CALIFORNIA STREET
TELEPHONES { DOUGLAS 4371
HOME C 6378

CODES:
WATKINS, 1881, AND APPENDIX, 1884
WESTERN UNION A 1

CABLE ADDRESS:
"BEYFUSS"

SAN FRANCISCO, CAL., March 23, 1912.

Capt. W. C. Crandall,
3468 Third St.,
San Diego, Cal.

Dear Sir:

We have been working for Mr. W. E. Ritter during the past two weeks on a power vessel for the purpose of taking a party along the coast to examine the kelp beds. Mr. Ritter has now requested us to take this matter up direct with you.

We have had the matter up with Capt. Harry Goodall and expect an answer from him by Monday regarding his "LUCERO". We have also wired New York owners of yacht "COMFORT" now at Avalon and should hear from them by the first of the week.

Our idea is to get a vessel in which the party can be comfortable and we think either of these boats would about fill the bill. It is likely that you are more or less familiar with both of them. Will you kindly give us your ideas in the matter?

Very truly yours,
C. BEYFUSS CO.
by E. B. Smith

EBS/DCK.

ADDRESS ALL COMMUNICATIONS TO
"CHIEF, BUREAU OF SOILS."

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS,
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(m+a) March 25, 1912.

Captain W. C. Crandall,
Marine Biological Association,
San Diego, California,

Dear Captain Crandall:-

I have your letter of March 17, and have read it with interest.

The scale that we have decided on for the maps of the Pacific Coast, for your use, is 1 to 100,000. This is somewhere near 2 miles to the inch. It would be extremely difficult for us to make charts on a larger scale with the facilities we have at our disposal, and this scale has the additional advantage of being the one we will probably use in publishing, which will save a considerable amount of labor and time by eliminating the necessity for reducing. I will take the matter up with our map department to see whether the suggestions regarding the margin can be followed out.

The situation as regards the Bill is still unchanged. As it stands at present we cannot go to work before the first of July because the

Crandall:-

money will not be available until then. We are having put in a deficiency appropriation to take care of the work from the middle of April according to our previous plans. I hope that this will go through, and if it does it will of course eliminate all difficulties that we are now laboring under as regards the preliminary part of the work. I will let you know just as soon as I possibly can how things turn out.

I note with interest your information concerning the damage to the kelp beds. I trust that this will not be permanent and that the damage is really not serious.

We have already mailed you a copy of Senate Document 190. If you do not receive this shortly after this letter reaches you, kindly let us know and we will see that another is sent.

With kindest regards,

Sincerely,

Frank R Cameron

In Charge.

I have heard indirectly from Fiminia that they have gotten some data on the regrowth of kelp after cutting. You had better see him and get me a definite statement if you can.

EDWIN B. SMITH O. J. BEYFUSS

C. BEYFUSS CO.

244 CALIFORNIA STREET

TELEPHONES { DOUGLAS 4371
HOME C 6378

CODES:
WATKINS, 1881, AND APPENDIX, 1884
WESTERN UNION A 1

CABLE ADDRESS:
"BEYFUSS"

SAN FRANCISCO, CAL., March 28, 1912.

Capt. W. C. Crandall,

3468 Third St.,

San Diego, Cal.

Dear Sir:

Yours of 25th inst, at hand and it changes our understanding of the requirements for the cruise.

We had heard that a party of six or seven professors from Berkeley were going on the trip and if such were the case, they could hardly be stowed in the quarters provided on board the usual craft of commerce.

Capt. Goodall has decided not to submit the "LUCERO" for charter. Likewise the owner of the "DISCOMFORT". He will sell but not charter. However now that we have a better idea of what you require we will, before long, be able to put something before you that will be nearer the mark.

Very truly yours,

C. BEYFUSS CO.

by E. J. Smith

ADDRESS ALL COMMUNICATIONS TO
"CHIEF, BUREAU OF SOILS."

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS,
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.
(-c+a-)

April 1, 1912.

Captain W. C. Crandall,
Marine Biological Association,
San Diego, California,

Dear Captain Crandall:---

I regret to have to inform you that I was mistaken when I advised you that you would receive separate reprints of your report on kelp which was made a part of Senate Document 190. It had not occurred to me that there would be the slightest difficulty in the matter. I enclose, however, copy of a letter which I have just received and which is self explanatory.

Very truly yours,

Frank K. Cameron

In Charge.

Enclosure

ADDRESS ALL COMMUNICATIONS TO
"CHIEF, BUREAU OF SOILS."

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS,
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c+a) April 6, 1912.

Captain W. C. Crandall,
Marine Biological Association,
San Diego, California,

Dear Captain Crandall:-

I have been postponing writing you from day to day in the hope that matters would soon shape themselves so that I could give you definite information. I had hoped and expected until recently that we could start the kelp work in May. I still entertain this hope, but it has become a very slim one, and I am bound to say frankly that our chances do not seem to be good for getting under way until after July 1, when the regular appropriation becomes available.

The appropriation as it passed the House gives us a sufficiently satisfactory Item for work next year, but the Item providing for work this spring was knocked out on a point of order, although there was ample precedent for the Item. I have been assured by members of the Senate that they would see

Crandall:---

that the authorization is provided for in the bill when it is presented to the Senate, but the Bill is still under consideration in the Committee, and no one seems to have the faintest idea when it will be reported to the Senate, and in the usual order of things it will be some weeks subsequent to that before the bill will become law. Meanwhile the Chairman of the House Committee has protested very vigorously against the Item, saying that it should be provided for in a deficiency bill to meet this objection and the bill has been presented in the House and reported to this Committee; but he utterly refused to give me any idea as to when this Bill will be considered in this Committee, much less reported to the House and started on its passage. You will see therefore that from our point of view the situation is really quite bad. I am going ahead with the plans for the maps, so that if by any lucky chance we get the money we will not be handicapped by lack of preparation in this direction. However, I really have but little expectation now of getting under way until ~~after~~ the first of July. In that event I presume you will have time and opportunity to straighten out your personal affairs

Crandall:--

in San Diego before taking the field. Just as soon as there is anything definite I will advise you promptly.

Yours very truly,

Frank R. Cameron

In Charge.

PACIFIC COAST BEEF & PROVISION CO.
BEEF AND PORK PACKERS
1000 LYON STREET

LOS ANGELES, CAL. Apr.27,1912.

Captain W. C. Crandall,
Biologist of the Marine Biological Assn.
La Jolla, California.

Dear Sir:- It is my understanding that you have had considerable experience concerning kelp as a potash and iodine producer. Would very much appreciate if you would give me any information that you have at hand regarding the value of this kelp as a potash and iodine producer, and is there any being manufactured on the Coast at present. If so, will be glad if you will give me details as to who is handling and where I could get in touch with them.

Should you be coming to Los Angeles in the near future, will be glad if you would advise as to where I could meet you, in order to talk the situation over.

Also, I would like to secure a couple of these weeds, known as the "Macrocystis pyrifera" variety. Could you secure these for me and send them to me at the above address in a tight package? If so, would be very pleased to reimburse you for any expense incurred in so doing.

Thanking you in advance, I remain,

Very truly yours,

J. O. Maurer

JEM*K V.P.&G.M.

ADDRESS ALL COMMUNICATIONS TO
"CHIEF, BUREAU OF SOILS."

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS,
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c+a) April 27, 1912.

Captain W. C. Crandall,
Marine Biological Association,
San Diego, California,

My Dear Crandall:-

I have received your letter of April 19, and am much interested in the information about the cutting of kelp, etc.

Regarding our plans for the next year's work; we have come to an absolute standstill. We have the maps practically ready to send you, but Congress has taken no further action on our appropriation further than to pass a bill through the House, making the money available on the first of July. The bill has not even been reported to the Senate, and no one seems to have the faintest idea when it will be considered, much less passed. We have put in a separate bill for an immediately available appropriation, but the Committee on Appropriations seems to have cheerfully pigeon-holed it and refuses to listen to our pleadings. I am obliged to say that it is now my judgment that we will not be able to move a finger before the first of July, except, possibly, to get Rigg off for Alas-

Crandall:-

ka a few days before on account of the boat sailing on that date. The appropriation for the current year is nearly exhausted, and what remains is mortgaged to the very last cent.

The only thing I can suggest is to put the matter frankly before the boat owner whose craft you personally prefer and find out if he will be willing to wait until July, although carefully explaining to him that neither you nor we can make any overtures in the way of a definite bargain until the money has been appropriated and the authority conferred upon us by Congress. I will try to write you again in a few days when the situation here has cleared up a little more definitely.

It is most unfortunate all around that we should have this delay, but at least we have the satisfaction of knowing that we have done everything possible, and the responsibility lies directly with Congress.

Sincerely,

Frank K. Cameron

In Charge.

L. A. MARTINEZ, PRESIDENT
GUAYMAS, MEXICO

J. LASA, GEN'L MANAGER
GUAYMAS, MEXICO

GEO. W. BEERMAKER, GEN'L AGENT
SAN DIEGO, CALIFORNIA

COMPAÑIA NAVIERA DEL PACIFICO, S. A.

DIRECT STEAMER LINE SAN DIEGO, CALIFORNIA, TO MAZATLAN
AND ALL PORTS ON WEST COAST OF MEXICO

1422 F STREET

SAN DIEGO, CAL., May 1-12

Mr. W.C.Crandall
3468 Third St
San Diego, Cal.

Dear Sir:-

Enclosed please find letter re. the yacht "Ramona", which explains itself.

Yours truly,

Geo W Beermaker

Mr. W.C.Crandall
3458 Thirty St
San Diego, Cal.

Dear Sir:-

Enclosed please find letter re. the yacht "Ramona", which explains itself.

Yours truly,

San Diego,California.April 23 I9I2.

Mr. George W.Beermaker

#I422 F Street,San Diego Cal.

Dear Sir:-

In answer to your inquiry regarding the Ramona,will say that the vessel is open for charter.

The Ramona is 65 feet long and 20 feet wide. Has three large double staterooms with hair mattresses and springs. Roomy saloon.withsleeping capacity of four. Large galley with wood and coal range,crews quarters Ample accommodations for I0 people. Very comfortable and seaworthy.

For the line of work that you mentioned ,we will make a special price of $350.00 per month for the yacht and my own services as Master.

In addition to this I presume it will be necessary to have a cook and a sailor which will amount to about $90.00 per month,possibly a little more. The cost for stores will amount to $25.00 per head per month.

I would like very much to meet your party,and have them come aboardand inspect the Ramona. If they did not want to stay aboard and would rather board on shore,some different arrangements could be made.

Very truly yours,

Capt.Wm.H.Hammond.

EDWIN B. SMITH O. J. BEYFUSS

C. BEYFUSS CO.
244 CALIFORNIA STREET
TELEPHONES { DOUGLAS 4371
HOME C 6378

CODES:
WATKINS, 1881, AND APPENDIX, 1884
WESTERN UNION A 1

CABLE ADDRESS:
"BEYFUSS"

SAN FRANCISCO, CAL., May 4, 1912.

Capt. W. C. Crandall,
3468 Third St.,
San Diego, Cal.

Dear Sir:

With reference to your letter of March 25th in which you stated that work on kelp bed survey would not start before middle of May or first of June, would you kindly tell us if you have done anything regarding a boat ahd if you wish us to take the matter up for you at this end.

Yours truly,
C. BEYFUSS CO.

by E. B. Smith

EBS/DCK.

EDWIN B. SMITH O. J. BEYFUSS

C. BEYFUSS CO.
244 CALIFORNIA STREET

TELEPHONES { DOUGLAS 4371
HOME C 6378

CODES:
WATKINS, 1881, AND APPENDIX, 1884
WESTERN UNION A 1

CABLE ADDRESS:
"BEYFUSS"

SAN FRANCISCO, CAL., May 23, 1912.

Capt. W. C. Crandall,
3468 Third St.,
San Diego, Cal.

Dear Sir:

We have located a small gas schooner which we think will be just about what you need. She is one year old-47 Gross and 39 net. 60.6 long and 20.3 Beam.-6.5 Depth of hold. Twin screws and 100 H.P.

It may be some few days getting in touch with her owner and in the meantime wish you would kindly let us know just how you wish to charter-whether bare vessel, you to furnish master, crew, provisions, fuel etc., or, do you wish her fully manned and provisioned? Also whether you would wish a figure by the day or month.

Kindly let us know, in your opinion how long the charter would last.

Very truly,

C. BEYFUSS CO.

by E B Smith

EBS.

RLJ

May 25, 1912.

The Secretary of Agriculture.

I have the honor to recommend that Capt. W. C. Crandall of the Marine Biological Society of San Diego, California, and a legal resident of the State of California, be appointed an Expert in this Bureau, at a salary of $250 per month for a temporary period not to exceed four months, the appointment to take effect on June 16, 1912, and to cover Mr. Crandall's traveling expenses from San Diego, California, to Seattle, Washington, and his subsistence expenses thereafter to and including June 30, 1912, salary and traveling expenses to be paid from the appropriation "General Expenses, Bureau of Soils, 1912, (Investigations of Fertilizer Resources)",

This appointment is requested in order that the Bureau may survey, map and prepare a report on the giant kelp groves lying along the American shores of Puget Sound, and the Pacific Coast from Cape Flattery southward. Capt. Crandall has had years of experience, and is an expert in this particular line of work, and is the only available well equipped person known to the Bureau that can be procured to do this work. The salary involved is very reasonable, taking into consideration the services to be rendered.

PHONES { DOUGLAS 4371
HOME C 6378

C. BEYFUSS CO.
BROKERS
244 CALIFORNIA STREET

SAN FRANCISCO, _____ 191__

This is from a photo of a sister sch. to the Owl. The only difference being that the Owl has only one mast and 6" less freeboard

PLG

EDWIN B. SMITH O. J. BEYFUSS

C. BEYFUSS CO.
244 CALIFORNIA STREET

TELEPHONES { DOUGLAS 4371
HOME C 6378

CODES:
WATKINS, 1881, AND APPENDIX, 1884
WESTERN UNION A 1

CABLE ADDRESS:
"BEYFUSS"

SAN FRANCISCO, CAL., June 4, 1912.

Mr. W. C. Crandall,
3468 3rd St.,
San Diego, Cal.

Dear Sir:-

Have seen Capt. Gibson, who owns the Schooner "Owl", and we are able to give you the following particulars.

She is a sloop rigged, keel vessel of 48 tons, just built. Has twin screw engines of 100 H. P. capable of driving her ten knots. Length 64, Beam 20, draws 5½ aft, but could be trimmed to 4. There are three berths in the cabin one in the engine room and several more forward. Vessel could carry about 80 tons. Has sharp bow

She has raised cabin, pilot house at break of the poop with a room just back of it which could be used as a chart room or your own room. Capt. Gibson has moved the stove up here but could put it back again.

Re. nautical instruments, he has only a compass, but anything else in that line can be hired from any chronometer dealer here.

He has been sailing her with captain, engineer and one deck hand and doing their own cooking. However, you would need a cook and, likely, more men. Capt. Gibson would wish to go in her himself and likewise take his own engineer.

The boat and captain would cost $3500 for three months (July, August and September), anything over this would have to be arranged. The idea is that these vessels are able to make very great profits during the summer months in the fruit business between San Francisco and up river points, and this vessel is partly promised to Hunt Hatch & Co. of this city to be delivered next week. It was for that reason that the galley was moved to the room abaft the pilot house to increase vessels carrying capacity. The fitout and crew, (with the exception of the captain, whose services go with, and are included in, the price asked), would have to be furnished by you.

Capt. Gibson is a very superior sort of a man. He was when I first knew him, about twenty-five years ago, a physican of independent means. He has followed the sea as much for pleasure as profit and seems quite interested in the idea of surveying the kelp beds and I know he would be of considerable benefit to you on the cruise.

The vessel has plenty of deck space and is a comfortable boat at sea. The engineer he now has thoroughly understands his engines, for which reason he wishes to take him along.

C. BEYFUSS & CO. TO Mr. W. C. Crandoll.

He pays his engineer $100 and the deck hands $45 per month. He thinks a Japanese cook could be procured for about $50.

The principal idea is that he must know immediately as the Hunt Hatch & Company's charter begins next week, although he would rather go on the survey than in the fruit carrying trade.

Let us know if there is anything you can do about this as soon as possible.

Very truly,

C. BEYFUSS COMPANY.

BY E D Smith

EBS/HE

ADDRESS ALL COMMUNICATIONS TO
"CHIEF, BUREAU OF SOILS."

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS,
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c+a) June 15, 1912.

Captain W. C. Crandall,
Marine Biological Association,
San Diego, California,

Dear Crandall:-

Congress has not passed the Agricultural Bill. This is also true of the other appropriation bills as you have probably noted from the newspapers. The Conferees of Senate and House on the Agricultural Bill met yesterday, so we are informed, failed to agree and dispersed, some leaving town. This means certainly no hope of the Bill receiving further consideration before July 5th, and the consensus of opinion here is that it will not pass for some time thereafter. On the first of July the new fiscal year commences and a joint resolution has been introduced in the Senate, making available for 15 days 1/365 of the present appropriation per day. This would give us something less than $500 for the 15 days for fertilizer investigations while the salary list would be over $600. I think we could arrange matters to take care of the salaries, but you will see that it would be utterly

(c+a)

Crandall:--

impossible to pay for a boat or field expenses. It would be foolish, moreover, to attempt it, if we could, not knowing what would happen after 15 days. But the situation is even worse than this, for the House leaders have announced according to the newspapers that they will not agree to the joint resolution. If this eventuates, on the first of July all work of the Department will practically stop. The Secretary told me last evening that he would simply notify every employee that he had no authority over him nor could authorize nor direct him to do anything, and they would have to exercise their individual judgments as to their actions. The President may direct that some of the work is to proceed and he will subsequently ask for a deficiency appropriation, but I find that the consensus of opinion here is that the President will not act, so far as we are concerned.

Under these circumstances, unforeseen and impossible of anticipation, the only course open was to notify you at once, not to incur any expense, or make any contracts or official engagements which would commit you in any way subsequent to the close of the fiscal year, June 30. We are quite unable to

Crandall:--

(c+a)

Crandall:--

make any predictions or form any judgments as to what may occur then or subsequently.

Yours very truly,

Frank V. Cameron

In Charge.

ADDRESS ALL COMMUNICATIONS TO
"CHIEF, BUREAU OF SOILS."

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS,
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c+a) Tuesday, June 25, 1912.

Captain W. C. Crandall,
3468 3rd Street,
San Diego, California,

Dear Crandall:-

Professor Whitney has turned over to me your letter of June 15 which has not been answered more promptly because the points raised have been covered in letters which crossed yours in the mail.

Congress has not passed our appropriation bill and it is absolutely impossible so far as we can see for it to be passed before the 6th of July. It is very improbable that it will be passed then, and how long we shall have to wait we are utterly unable to tell at this writing. It is probable, but by no means certain that a concurrent resolution will be passed on the first of July which will enable us to look after salaries, but it would be utterly inadequate to pay for the boat. The only possible chance that I can see for you to go ahead would be for some institution like the La Jolla Station to cooperate with us and stand the expense of the boat until our appropria-

(A+a)

Tuesday, June 25, 1912.

Captain W. O. Crandall,
3458 3rd Street,
San Diego, California.

Dear Crandall:-

Professor Whitney has turned over to me your letter of June 15 which has not been answered more promptly because the points raised have been covered in letters which crossed yours in the mail.

Congress has not passed our appropriation bill and it is absolutely impossible so far as we can see for it to be passed before the 6th of July. It is very improbable that it will be passed then, and how long we shall have to wait we are utterly unable to tell at this writing. It is probable, but by no means certain that a concurrent resolution will be passed on the first of July which will enable us to look after salaries, but it would be utterly inadequate to pay for the boat. The only possible chance that I can see for you to go ahead would be for some institution like the La Jolla Station to cooperate with us and stand the expense of the boat until our appropria-

(c+a)

Crandall:--

tion becomes available, when we could make necessary contracts, etc. This is too much to hope for from the present situation I am afraid. I am utterly unable to suggest anything at this writing other than to make such observation and collect such information regarding the kelp as you can in the neighborhood of San Diego pending advices from us.

Sincerely,

Frank R. Cameron

In Charge.

(o.s)

Crandall:--

tion becomes available, when we could make necessary contracts, etc. This is too much to hope for from the present situation I am afraid. I am utterly unable to suggest anything at this writing other than to make such observation and collect such information regarding the kelp as you can in the neighborhood of San Diego pending advices from us.

Sincerely,

In Charge.

ADDRESS ALL COMMUNICATIONS TO
"CHIEF, BUREAU OF SOILS."

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS,
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c+a)

June 27, 1912.

Captain W. C. Crandall,
3468 3rd Street,
San Diego, Cal.,

Dear Crandall:-

It is necessary to readjust our plans in view of the awkward situation developing by the failure of Congress to pass the appropriation bill. We have of course no idea now as to when the bill will be passed, but it is reasonable to expect that it will be within the next few weeks and therefore it appears best not to entirely abandon our proposed work on kelp. It is necessary to abandon the Alaska work until the spring at least, and Rigg and Zeller will drop out on the first of July as we have no funds for their salaries or expenses. I think it wise, however, for you, if you are willing to do so, to stand by, and I am requesting a letter of authorization allowing not to exceed $50 for field expenses for the first 15 days of July, with a view to your mapping the kelp

(6+6)

June 27, 1918.

Captain W. C. Crandall,
3466 3rd Street,
San Diego, Cal.,

Dear Crandall:-

It is necessary to read just our plans in view of the awkward situation developing by the failure of Congress to pass the appropriation bill. We have of course no idea now as to when the bill will be passed, but it is reasonable to expect that it will be within the next few weeks and therefore it appears best not to entirely abandon our proposed work on Islip. It is necessary to abandon the Alaska work until the spring at least, and Tidge and Keller will drop out on the first of July so we have no funds for their salaries or expenses. I think it wise, however, for you, if you are willing to do so, to stand by, and I am requesting a letter of authorization allowing not to exceed $50 for field expenses for the first 15 days of July, with a view to your mapping the Islip

(c+a)

Crandall:-

groves opposite Coronado Beach and as far down toward the Mexican boundary as you can go, and for the preparation of a report on the effects of cutting and regrowth of the kelp, and what has been done of the commercial exploitation of the same by the C.C.C. company and such other interests as may have entered the field in the neighborhood of San Diego and Los Angeles. At the present time I am informed by the authorities that we can go no further with our plans than the 15th of July.

This letter, which you will take as a letter of instructions will give you your directions up to then, and the letter of authorization will follow within a few days I anticipate. If it goes through I will promptly wire you that it is on its way so that you can feel justified in expending the $50, as otherwise you would be spending it at your own risk. We are in hopes of course that the bill will become law before the 15th of July, and the minute it is clearly safe to do so we will wire you to go ahead with your original plans of hiring a boat and starting in at that time. I think it will be safer for you to start at the southern end, practically the end of your

Page two

(c+a)

Crandall:--

last year's work and work north instead of working south. Practically of course this means mapping from Point Conception northward as far as you can go with the season's limitations. If, however, the bill does not pass in time to let us get under way by the 15th I am greatly in doubt as to the advisability of continuing the effort to push the work this summer. I would like to have your opinion. It may be wiser to work this summer as far north as you can, supposing that you can get off sometime about the first of August and to finish up some time in the spring. The disadvantage of this arrangement is that the northern kelp are at their best during the interim from July 1 to August 1, whereas you could map the southern kelp most any time. But between the demands of nature and those of Congress we have simply to use the best judgment we can command, and I would like to have your advice promptly as to what we had best do in view of the circumstances as I have given them to you.

Sincerely yours,

Frank W. Cameron

In Charge.

vice promptly as to what we had best do in view of the circumstances as I have given them to you.

Sincerely yours,

In Charge.

DEPARTMENT OF AGRICULTURE
OFFICE OF THE SECRETARY
WASHINGTON

July 1, 1912.

GENERAL ORDER NO. 155.

Attention is invited to the following provision in the Act, approved June 26, 1912, making appropriations to provide for the expenses of the government of the District of Columbia for the fiscal year ending June thirtieth, nineteen hundred and thirteen, and for other purposes:

"Sec. 8. No money appropriated by this or any other Act shall be expended for membership fees or dues of any officer or employee of the United States or of the District of Columbia in any society or association or for expenses of attendance of any person at any meeting or convention of members of any society or association, unless such fees, dues, or expenses are authorized to be paid by specific appropriations for such purposes or are provided for in express terms in some general appropriation."

Hereafter, in conformity with the foregoing provision, no officer or employee of the Department of Agriculture attending any convention or meeting of an association of any kind will be reimbursed for any expenses incurred in connection therewith. In case officers or employees desire to attend at their own expense society or association conventions or meetings which have for their object the advancement of sciences bearing directly upon the work of the Department of Agriculture or objects otherwise related to the work of the Department, permission must be secured in advance from the Secretary upon the recommendation of the Chief of the Bureau involved. When such permission is granted by the Secretary the time consumed by officers or employees in proceeding to such conventions or meetings, in attendance thereon, and in returning to their official duties, will be charged to annual leave, with or without pay, as the Secretary may direct.

All previous orders in conflict with the above are hereby revoked.

James Wilson

Secretary.

ADDRESS ALL COMMUNICATIONS TO
"CHIEF, BUREAU OF SOILS."

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS,
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c+a) Friday, July 5, 1912.

Captain W. C. Crandall,
3486 3rd Street,
San Diego, Cal.,

Dear Captain Crandall:-

Your letter of authorization has just been received in the office and will be forwarded to day by our Financial Clerk. You will see that you have been allowed the sum of $100 for this month, the supposition being that the appropriation bill will pass before the close of the month and you will then get another letter of authorization with a more liberal allowance. You will further see that under the Secretary's ruling regarding the provisions of the present bill, You can spend no more than the pro rata per day. This is carefully explained in the circular which Mr. Wolf will forward to you with the letter of authorization. I merely mention it to caution you. It seriously handicaps the usefulness of the money, but is something which we can in no way help until the passage of the new bill.

(c+a)

Crandall:--

It is because of a very possible misunderstanding about this matter that I have not wired you this afternoon.

Yours very sincerely,

Frank McCameron

In Charge.

Please let me know what you can do about getting a boat, at the next bill gets through before August 1st. Yours

San Francisco July 8th 1912

Mr. W. C. Crandall,
La Jolla, Cal.,

Dear Sir:-

I have a copy of Document 190 62nd Congress on Fertilizer Resources of the United States which I studied with great interest. I have personally made a number of experiments in the extraction of potash salts from kelp and seaweeds and propose to erect a plant to extract same on a commercial scale.

I intend going to San Diego in a month or two and if agreeable will visit you. Any information you may be able to give me or articles you can refer me to will be greatly appreciated. I understand Mr. J.W. Turrentine has written a number of articles on kelp and I believe a Bulletin has been issued, the title and nature of same, I am not familiar with.

I would like to get some information on the plant in operation at Encinitas, I understand

they are using some 6,000 tons of kelp per year. Could you enlighten me on this and if same is paying?

Thisting to hear from you at your earliest convenience and thanking you

Dam,

Respectfully Yours

E. Blanckenburg

3675 Jackson St.

San Francisco

Cal.

ADDRESS ALL COMMUNICATIONS TO
"CHIEF, BUREAU OF SOILS."

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS,
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(C+a) Tuesday, July 9, 1912.

Captain W. C. Crandall,
3468 3rd Street,
San Diego, California,

Dear Captain Crandall:--

In reply to your most interesting and suggestive letter, I am very sorry that I cannot fall in at once with the plan suggested by you, but the trouble is that we are no better off about our appropriation than we were before in that we have not the slightest idea or intimation when Congressis going to pass it. As you probably know from the public print a concurrent resolution was put through extending our present appropriation for one month; but up to date, so far as we are able to learn, there has not been the slightest effort made by Congress in the direction of pushing forward the appropriation bill for this Department, and we are totally in the dark as to when Congress will take it up. It may be within the next few weeks and then again, so far as we know, it may not be for months, and in the absence of any idea as to when it will be taken up I am utterly

(c+s) Tuesday, July 9, 1912.

Captain W. C. Crandall,
3468 3rd Street,
San Diego, California.

Dear Captain Crandall:--

In reply to your most interesting and suggestive letter, I am very sorry that I cannot fall in at once with the plan suggested by you, but the trouble is that we are no better off about our appropriation than we were before in that we have not the slightest idea or intimation when Congressis going to pass it. As you probably know from the public print a concurrent resolution was put through extending our present appropriation for one month; but up to date, so far as we are able to learn, there has not been the slightest effort made by Congress in the direction of pushing forward the appropriation bill for this Department, and we are totally in the dark as to when Congress will take it up. It may be within the next few weeks and then again, so far as we know, it may not be for months, and in the absence of any idea as to when it will be taken up I am utterly

(c+a)

Crandall:------

unable to make any assurances or even suggestions, as the only information I can get from my official superiors in the Department is that it is wiser for us to "stand pat" on existing arrangements until something definite is known. Should the bill go through at any time before the first of August, I think there will be no difficulty whatever in making arrangements with the owner of the Paxinosa upon our wiring you to go ahead, but I cannot even definitely promise this on account of being utterly at sea regarding the probable action of Congress. The whole matter is very unsatisfactory and very dissapointing and discouraging. I am quite willing to admit that I see the full force of your argument that the work should be done this year, but my hands are tied in a way that could not possibly have been anticipated. The only course left to us is to do the best we can from day to day until Congress authorizes us to go ahead in a normal way. This difficulty is not the only one by any means that Congress has made for us and, so far as productive work is concerned, we are looking

(c+s)

Crandall:------

unable to make any assurances or even suggestions,
as the only information I can get from my official
superiors in the Department is that it is wiser for
us to "stand pat" on existing arrangements until
something definite is known. Should the bill go
through at any time before the first of August, I
think there will be no difficulty whatever in making
arrangements with the owner of the Paxinos upon our
wiring you to go ahead, but I cannot even definitely
promise this on account of being utterly at sea regard-
ing the probable action of Congress. The whole mat-
ter is very unsatisfactory and very disappointing and
discouraging. I am quite willing to admit that I see
the full force of your argument that the work should
be done this year, but my hands are tied in a way that
could not possibly have been anticipated. The only
course left to us is to do the best we can from day
to day until Congress authorizes us to go ahead in
a normal way. This difficulty is not the only one
by any means that Congress has made for us and, so
far as productive work is concerned, we are looking

Page two

(c+a)

Crandall:--

forward to a discouraging year.

Sincerely yours,

Frank K. Cameron

In Charge.

(c+s)

Crandall:--

forward to a discouraging year.

Sincerely yours,

In Charge.

ADDRESS ALL COMMUNICATIONS TO
"CHIEF, BUREAU OF SOILS."

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS,
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c+a) Monday, July 22, 1912.

Captain W. C. Crandall,
3468 3rd Street,
San Diego, California,

Dear Crandall:-

Replying to your letter just received, I will say that the Agricultural Bill has not yet passed and I am utterly unable to advise you when it will. We are in the midst of a most discouraging snarl and there is nothing whatever for us to do except go along as at present until we know what Congress is going to do. The last rumor is that the bill will not pass this year, but that we will use an extention of the present bill. This of course will be most unsatisfactory, but as it is only a rumor there is no use in taking it too seriously, and it is evidently our duty to act as though we expected almost any time to get a new bill available. On the other hand it is quite impossible for us to take any definite action on that basis. I am very glad that you have been able to do somethind and make some arrangements with the Paxinosa. If the new bill is not available by August

(c+a)

Crandall:-

1 we will simply have to run along in August on the same basis as you have worked in July, hoping that the bill will go through in time for us to do something before the month ends and in September. At any rate we want to see that you are not out of pocket and, furthermore, that we have at least something to show that we have made every possible effort on our part to keep the work going.

Sincerely yours,

Frank R. Cameron

In Charge,

Officers and Directors
R. A. GUTHRIE, President
J. M. SHINER, Sec-Treas.
E. C. SHINER, Vice-Pres. Traffic Mgr.
H. L. DIETCHER, Factory Supt.
JOHN F. POOL
E. W. KAPP
C. C. CURTIS, M. D.

PHONE MAIN 8430

Pacific Kelp Mulch Co.

INCORPORATED

MANUFACTURERS OF

Kelp Mulch and Kelp Products

Factory, Warehouse and Wharfage
TERMINAL ISLAND

General Offices
335-36 Union Oil Building
LOS ANGELES, CAL.

Los Angeles, Cal., Oct 24th 12 191

MR. W. C. CRANDALL,

SAN DIEGO, CALIF.

DEAR FRIEND;-

Your letter of the 23rd Inst. to hand and contents are fully noted.

We are incloseing you herewith a kodak picture of our machine working in the kelp fields or beds. We have not been successful in geting a real good picture however this one is far better than any other we have secured to date.

The write up by Mr. Forbes Lindsay was in the Sunday Times, Magazine section on the 20th.

We thank you for refering Mr. Branden to us and when he takes the proposition up with us we will treat him right.

We will launch another barge on the 26th Inst. it is much larger than the one we are now useing. We have under construction a cutting machine to cut the kelp up after it has come up from the water that will cut it as fast as it comes up and hope to have it working by the time you make the next call.

We have just secured some very valueable information in regards to the use of kelp on citrus trees. A Mr. C. A. Hammond ordered 80 tons by mail from us and in the letter he informed us that he has saw trees both orange and lemon , in the state of Sonora Mex. that had never had any other kind of fertilizer used on them but sea kelp, the trees was then 50 years old and were in excelent condition and loaded with fruit. He asked how the kelp was secured and was informed that after the winter

Officers and Directors
R. A. GUTHRIE, President
J. M. SHINER, Sec-Treas.
E. C. SHINER, Vice-Pres. Traffic Mgr.
H. L. DIETCHER, Factory Supt.
JOHN F. POOL
E. W. KAPP
C. C. CURTIS, M. D.

PHONE MAIN 8430

Pacific Kelp Mulch Co.

INCORPORATED

MANUFACTURERS OF

Kelp Mulch and Kelp Products

Factory, Warehouse and Wharfage
TERMINAL ISLAND

General Offices
335-36 Union Oil Building
LOS ANGELES, CAL.

Los Angeles, Cal., _____ 191__

#2

storms that the owner sent his peons down to the beach and gathered the help up washed it in the creek and then chopped it up with machattas and worked it under the ground. The owner Don Henricca Camoe stated that his grand father used it, also his father and so he does and never gave any other kind of fertilizer a thought.

If you have any information along the line of the use of help in Mexico, we would appreciate it very much if you will furnish us with same.

Any information that we can furnish you or anything that we can do to assist you in your work, we will be very glad to furnish or do.

RESP'T. YOURS,

PACIFIC KELP MULCH CO.

J. M. Shiner.

ADDRESS ALL COMMUNICATIONS TO
"CHIEF, BUREAU OF SOILS."

RLJ

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS,
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

August 3, 1912.

Capt. W. C. Crandall,
3468 Third Street,
San Diego, Calif.

Dear Crandall:-

Your letter describing your trip on the Paxinosa was received several days since but I delayed answering because of the uncertainty as to what provision was going to be made for our work during the current month. Our appropriation bill has not yet passed Congress and we are still as much in the dark as ever as to when it is likely to do so. Provision has been made for us to run until the 15th of the month on the same plan as we ran last month and I have arranged that $75.00 will be available for you over and above your salary. You will please explain to Col. Rader that the mess we are in still continues so that we are not able to make arrangements for the lease of the Paxinosa.

We are greatly pleased at the energy and initiative you displayed last month, and if you can repeat in any such style this month you will be a wonder.

I am sorry we cannot send you more cheerful news.

Sincerely yours,

Frank K. Cameron

In Charge.

ADDRESS ALL COMMUNICATIONS TO
"CHIEF, BUREAU OF SOILS."

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS,
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c+a) Saturday, August 10, 1912.

Captain W. C. Crandall,
3486 3rd Street,
San Diego, California,

Dear Captain Crandall:-

Your letter of August 2 came a day or two ago and I am greatly pleased with the progress you have made. I delayed answering because of the emminent passage of our appropriation bill. The bill is now through both the House and Senate and gone to the President who has not yet signed it. As soon as it becomes law we will wire you to proceed. The contract forms have been sent forward to you and I wish you to make your arrangements with the Paxinosa as promptly as possible and to work as far north as you can during the remainder of the season. We shall be guided entirely by your judgment in the actual conduct of the work. It will be desirable for you to keep us posted at frequent intervals, probably at intervals of not greater than a week, as to your whereabouts and probable movements so that we will be able to get in touch with you promptly as well as be posted

(c+a)

Crandall:---

on how you are progressing. Of course I realize that you cannot let us know at any definite times, as you may be off shore on the work.

I wish you would advise me also as to what arrangements you wish to make about forwarding your pay checks. We will do everything in our power to assist you in this as in every other way possible.

Sincerely,

Frank A. Cameron

In Charge.

Form 2289 B.

NIGHT LETTER

THE WESTERN UNION TELEGRAPH COMPANY

INCORPORATED

25,000 OFFICES IN AMERICA — CABLE SERVICE TO ALL THE WORLD

This Company **TRANSMITS** and **DELIVERS** messages only on conditions limiting its liability, which have been assented to by the sender of the following **Night Letter.** Errors can be guarded against only by repeating a message back to the sending station for comparison, and the Company will not hold itself liable for errors or delays in transmission or delivery of **Unrepeated Night Letters,** sent at reduced rates, beyond a sum equal to ten times the amount paid for transmission; nor in any case beyond the sum of **Fifty Dollars,** at which, unless otherwise stated below, this message has been valued by the sender thereof, nor in any case where the claim is not presented in writing within sixty days after the message is filed with the Company for transmission.

This is an **UNREPEATED NIGHT LETTER,** and is delivered by request of the sender, under the conditions named above.

THEO. N. VAIL, PRESIDENT — BELVIDERE BROOKS, GENERAL MANAGER

RECEIVED AT S. E. Cor. Pine and Montgomery Sts., San Francisco ALWAYS OPEN

18.BY.KG. 30 N.L.

San Diego, Cal., Aug. 20,21,12

W. C. Crandall,

Care Customs Office SAN FRANCISCO, CALIFORNIA.

Your night letter received your mother is well and cheerful nothing from ritter bonds carried 5 to one ours was the banner precinct 37 to 1 all is well.

J W West

232a

ADDRESS ALL COMMUNICATIONS TO
"CHIEF, BUREAU OF SOILS."

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS,
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c+a) Friday, October 4, 1912.

Captain W. C. Crandall,
State Noraml School
Sandiego, California,

Dear Crandall:-

Your letter of September 27, addressed to the Chief of the Bureau has finally found its way to my desk.

I am glad to know that you have returned from such a successful trip, and am looking forward with great interest to the maps and the report.

The voucher for the yacht I have approved and referred to our Financial Clerk who tells me he will push the matter and see that the check for the yacht as well as the check deposited with the contract are forwarded promptly to Colonel Rader. I should like to have you express to Colonel Rader our appreciation of his courtesy under the trying and unusual circumstances attending the negotiations for the use of his boat.

I am more than glad that you have looked up the International Seaweed Products Company and, es-

(c+a)

Crandall:---

pecially the Pacific Kelp Mulch Company. I think it would be well for you, as soon as you conveniently can, to obtain a sample of the Pacific Kelp Mulch Company's product, preferably some that has been sold and is on its way to the consumer, put it in a glass fruit jar, seal it and forward to us by express, collect at this end. We will examine it carefully here to see whether there is any justification for the attitude taken by Mr. Burd. I am also about to write Burd, telling him that I have been informed of his attitude toward this product, (but of course giving him no idea as to where I got the information,) and asking his reasons for it. We might just as well go after this business in the beginning as we will have to do it sooner or later and establish the facts. If the Company is operating in good faith as we are inclined to think, and as your visit seems to indicate, they are entitled to all reasonable assistance; but on the other hand if there is anything wrong with their product we want that fact established as soon as possible. Unless the kelp is radically different from the samples we have already examined Burd's posi-

(c+a)

Crandall:---

tion is untenable, and we shall convey that fact to him quietly but firmly.

I am at a loss to understand how claims can be filed on kelp beds in Puget Sound. Under the interpretation of the law by the authorities here, the control of the kelp beds lies entirely within the purview of the States as the beds are all inside the 3 mile limit, and I do not see how the State of Washington can handle claims of this kind, although I am aware that the state law officials were contemplating last spring the preparation of a statute to cover such cases. I have not heard that any such statute has been enacted. I will call the matter to the attention of Rigg and ask him to look into it and advise us.

As regards Mr. Michael's work, the best way to handle it that I can see would be to make a contract with him to furnish a report on his work, that is, say, within 30 days and if on the receipt of the report it is satisfactory we will pay him an honorarium of $60, which should be sufficient to cover boat hire and any other expenses that he had, as well

(c+a)

Crandall:-

as leave him a fair compensation for his work. I wish you would take this up with Mr. Michael, and if the arrangement is satisfactory please advise me, giving me his initials and title and statement as to the character of the report which he can make. If any of these details do not appeal to you as proper please advise me to that effect and what changes you would suggest.

As to the preparation of your own report, I have no particular suggestions to make and am sure that you will be able to dope this out for yourself better without advice and with the experience recorded in 190. Of course items of commercial importance should be brought out as strongly as possible.

Yours very truly,

Frank R. Cameron

In Charge.

Page four

ADDRESS ALL COMMUNICATIONS TO
"CHIEF, BUREAU OF SOILS."

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS,
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c+a) Wednesday, October 16, 1912.

Ans page sent to Mitchell

Captain W. C. Crandall,
State Normal School,
San Diego, California,

Dear Crandall:-

Your letter to the Chief of Bureau, dated October 9, has ultimately reached me.

I am glad you are going up to Los Angeles to get samples of the P. K. M. Co. It does seem as if this were an unnecessary labor, but we have to be sure in all matters of this kind which may come into controversy. I have written to Mr. Burd and yesterday received a reply from him enclosing a copy of letter which he wrote to the P. K. M. Co. a month or 6 weeks ago. Burd flatly contradicts the impression that he is opposed to the use of kelp, but takes two grounds; one, that the amount of fertilizer material in the wet kelp as sent out by the P. K. M. Co. is not sufficient to justify the price they ask. I should infer from his several statements, though he does not say so directly, that he would consider about half of what they are asking as the correct price. This is of course

(c+a)

Crandall:-

a matter with which we have no particular concern. The second point in Burd's letter is that he thinks we have been entirely too optimistic in our views as to the possibility of developing the kelp industry, and that we have done a great deal of harm by broadcasting our optimistic views because we have induced many innocent investors to put their money into wildcat schemes. This I regard as sheer nonsense. Wildcat schemes are almost certain to follow any announcement of important industrial advancement, but with federal and state agencies at the command of every one there is no excuse for the innocent investor, and the experience of some years in looking into such matters convinces me that the so-called innocent investor in a large number of cases is a person who is very eager to make a great deal of money very quickly in taking a long shot gamble, and squeals that he has been misled only when he fails to get the long end of the deal.

I have just gone over the matter of Mr. Michael's work with our Financial Clerk and we are requesting of the Department an authorization to pay Mr. Michael $25 on receipt and approval of a report on "Observations of the Cutting of the Giant Kelps."

(3+a)

Crandall:-

a matter with which we have no particular concern.

The second point in Burd's letter is that he thinks we have been entirely too optimistic in our views as to the possibility of developing the kelp industry, and that we have done a great deal of harm by broadcasting our optimistic views because we have induced many innocent investors to put their money into wildcat schemes. This I regard as sheer nonsense. Wildcat schemes are almost certain to follow any announcement of important industrial advancement, but with federal and state agencies at the command of every one there is no excuse for the innocent investor, and the experience of some years in looking into such matters convinces me that the so-called innocent investor in a large number of cases is a person who is very eager to make a great deal of money very quickly in some a long shot gamble, and appears that he has been misled only when he fails to get the long end of the deal.

I have just gone over the matter of Mr. Michael's work with our Financial Clerk and we are requesting of the Department an authorization to pay Mr. Michael $25 on receipt and approval of a report on "Observations of the Cutting of the Giant Kelps."

There two

(c+a)

Crandall:-

This you see leaves a wide latitude of the way in which Mr. Michael can handle the matter, and I would be obliged if you would take it up with him and explain that what we wish is a typewritten report of what he actually did with such observations as his experience and knowledge as a scientist will enable him to make, that the report should be submitted to you for your information, and that it should then be ~~submitted~~ transmitted to me for inspection and approval. If the report is submitted to us here prior to the 15th of November a check will be promptly forwarded to Mr. Michael and the report filed in the records of this Bureau. I imagine, of course, that the information it contains will be utilized by you in your report, and that it will not be necessary or desirable for us to do anything further with it.

I have just received a letter from Rigg who tells me that he had a conversation with the Governor of Washington and that it is likely the State Legislature will take up the matter of controlling the kelp beds at their next session, and asking for suggestions along this line. I am not prepared to make any at the present time, but anything in this direction with which

(c+a)

Crandall:-

you may be able to help me will be greatly appreciated.

I have just been notified that your temporary appointment as an expert ceases to day. This of course I knew, but the fact was simply formally stated. I trust the arrangement has been very satisfactory to you. I am of course anxious to get the report as soon as possible. I am not clear as to the trouble with the maps but will take it up with one of my men and see that you get the copies as soon as possible. I shall have to ask you to leave blanks for the results of the analysis of the kelp samples. We have been up against it here this summer. Not only was our work terribly delayed because of failure of the appropriation bill to pass on time, but a large number of our men have resigned. As a matter of fact I am at present without any analyst who can take up the work. We have been doing everything possible to get the Civil Service Commission to supply eligibles to us. They are very rigid in these matters now and we have not yet gotten anyone, though we appointed 3 or 4 men who promptly used the fact that they had a job with us to increase their salaries wherever they were and then turned us down. There is some

(c+a)

Crundall :-

(c+a)

Crandall:--

prospect now that we will be able to offer a little better salary and will be able to get hold of some men within the next few days or weeks and hurry things along..

I wish very much that you would get some photographs, drawings or whatever is available to illustrate as clearly as possible the cutting device of our friends, the P. K. M. Co., and acquire all possible information about the cost of operation. Some guarded statement giving the facts in your report would be desirable.

Yours very truly,

Frank H Cameron

In Charge.

ADDRESS ALL COMMUNICATIONS TO
"CHIEF, BUREAU OF SOILS."

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS,
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c+a) Friday, October 18, 1912.

Captain W. C. Crandall,
Marine Biological Association,
San Diego, California,

Dear Crandall:-

I am transmitting herewith formal notice from the Appointment Clerk that your appointment has terminated technically, though of course we are expecting you to hustle along with the report.

I am sorry that we delayed sending you the maps through a misunderstanding; I had supposed that they had gone some time since, and found, much to my chagrin, that they did not go off until yesterday.

Before very long I shall have to commence on the plans for the work next spring. It looks probable now that we will want to send 2 parties to Alaska; one to survey the kelp beds from Kodiak down along the peninsula past the Shumagins. I think it likely that Rigg will want to go in charge of this party as this was the expedition we had planned for him this past summer. The second party we will want to send to

(c+a)

Crandall:-

the southern Alaskan regions, and before considering this matter in more definite shape I would like to know if you would care to take up the work again next year and take charge of the second Alaskan party? My idea is that you get off about the 15th of May, or perhaps a week earlier, which would give you nearly 4 months for the work, as it would be impracticable to work in Alaska very late.

Dr. Turrentine will probably go West in the early spring to make some investigations of the possibility of fish scrap utilization, and will more than likely want to go to Alaska, and might be with you part of the time.

I trust that you are getting along with the report, and that you have been able to get hold of some good photographs, especially of the cutting apparatus of the Pacific Kelp Mulch Company.

Yours very truly,

Frank K Cameron

In Charge.

Inclosure

ADDRESS ALL COMMUNICATIONS TO
"CHIEF, BUREAU OF SOILS."

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS,
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c+a) Monday, October 21, 1912.

Captain W. C. Crandall,
State Normal School,
San Diego, California,

Dear Captain Crandall:-

I have read with great interest your letter of October 13. For the present I think you will have to use the analytical data in Report 190 as I have not, up to the present time, been able to get hold of any new analyst to take up the work in the laboratory here, and it will be several weeks, possibly several months, before we can catch up on the work. I am expecting a new man in every day now, and if he should prove to be competent I shall set him to work on the matter at once. But in the event that he is not good enough for the job we will be delayed somewhat longer.

Unless it should prove absolutely essential to print your report without waiting for the analytical data, of course we will utilize the new figures in your report, but I think it unwise to wait for these, but for you to go ahead and turn in the report on the basis

(c+a)

Crandall:-

of the data you already have.

We are tremendously pushed here; our troubles have been greatly increased by lack of men to handle the much augmented work.

Sincerely yours,

Frank N. Cameron

In Charge.

ADDRESS ALL COMMUNICATIONS TO
"CHIEF, BUREAU OF SOILS."

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS,
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c+a) Tuesday, November 5, 1912.

Captain W. C. Crandall,
3486 3rd Street,
San Diego, Cal.,

Dear Crandall:-

The report came yesterday and I have been going over it with great interest. I am much puzzled by the fact apparently that last year you surveyed 85 square miles, while this year this same area plus extra areas north only totals 20 square miles. Something is obviously wrong, and I wish you would straighten me out on this as soon as possible. Wire, if you can, collect at this end.

I hope you will think over the Alaska proposition seriously. Prof. Frye and one or two other people would like to have the assignment, but I would rather you should take it if you can.

Sincerely yours,

Frank D. Cameron

In Charge.

Did not include
last year area in
present report. St. Conception
Unit Equals 20+ miles.
St. Conception to Santa Cruz
Sta. D. to Pt. Pt. 91 mi.

ADDRESS ALL COMMUNICATIONS TO
"CHIEF, BUREAU OF SOILS."

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS,
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c+a) Monday, November 18, 1912.

Captain W. C. Crandall,
Marine Biological Station,
San Diego, California,

Dear Crandall:-

We have just finished going over the text of your report. As you sent it to us it was a most interesting report, but hardly suited to publication, so we have re-cast it, and I am sending you under separate cover a typewritten copy of the report as you sent it in, and a copy of the rewritten report. In going over the material we have corrected your figures in a few places, and find that the total area of the kelp beds of the Mexican coast is somewhat less than you made it, while the area of the coast of the United States is somewhat larger than your calculations.

We are not clear as to what you mean by "availability" in Tables I and III, and I would be obliged if you would write us a statement for insertion in the report.

The chapters on the analytical data are, as

(c+a)

Crandall:--

you will observe, incomplete. I will draft these out when the data is obtained and send them on for your criticism. I would suggest that you keep a copy of the report as you wrote it for your own use and after correcting the redrafted report and indicating any additions, subtractions or changes you think desirable, you send it back to us so we can have them to turn over to the Editor. I would say that the present idea we are working on is that we will get out a bulletin which will be in three parts; a discussion of the general problem of kelp, by myself, being mainly hashed over material from what has been done already; a report by Rigg; and a report by yourself, the whole to be accompanied by a complete set of maps brought up to a uniform scale.

I would like to know if you have thought more about the proposed trip to Alaska next spring, and whether or not it would be practicable for us to count on you to take charge of one of the parties. I should think that your people would be glad to have you connected with this work, as an advertisement for your school, and for that reason would be

(c+a)

Crandall:---

willing to let you off a little earlier. Of course the Deanship of the Summer School is a different matter, and I suppose that in the last analysis it comes down to a question of dollars and cents; whether you would make more money out of the summer school or out of the trip to Alaska for the 5 or 6 months which would be required for the trip to Alaska and the working up of your material. As this ought to mean a clear $1,000 at least in your pocket, your summer school must be a pretty good one to be able to compete with this proposition, leaving aside the experience which ought to serve you well in the future. However, you know all the material facts in the case now, and I presume you will let me know definitely how you feel about it as soon as you can.

Yours sincerely,

Frank A. Cannon

In Charge.

(e-s)

Crandall:--

willing to let you off a little earlier. Of course the Deanship is a different matter, and I suppose that in the last analysis it comes down to a question of dollars and cents; whether you would make more money out of the summer school or out of the trip to Alaska for the 3 or 4 months which would be required for the trip to Alaska and the working up of your material. As this ought to mean a clear $1,000 or less in your pocket, your summer school must be a pretty good one to be able to compete with this proposition, leaving aside the experience which ought to serve you well in the future. However, you know all the material facts in the case now, and I presume you will let me know definitely how you feel about it as soon as you can.

Yours sincerely,

In charge.

ADDRESS ALL COMMUNICATIONS TO
"CHIEF, BUREAU OF SOILS."

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS,
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c+a) Thursday, November 21, 1912.

Captain W. C. Crandall,
Marine Biological Association,
San Diego, California,

Dear Crandall:-

I have at last been able to get the analytical work on the kelp under way and results are beginning to come in. I have 10 reports so far, and the percentage of potash apparently is running somewhat higher than in the samples that we analyzed last year. Whether or not this was due to an over-cautiousness on the part of Turrentine making the analyses last year I am unable to say, and will not be able to even formulate a definite opinion until I have all the material and have been able to study it carefully. This year the work is being done by two men who are checking each other, and so far the duplicates have run very close together, so there is no question but that the results they are getting are reliable.

I am sending you a memorandum of the results obtained from the samples collected by the Pacific Kelp Mulch Company. Unfortunately these

(6+a) Thursday, November 21, 1912.

Captain W. C. Crandall,
Marine Biological Association,
San Diego, California.

Dear Crandall:-

I have at last been able to get the analytical work on the Kelp under way and results are beginning to come in. I have 10 reports so far, and the percentage of potash apparently is running somewhat higher than in the samples that we analyzed last year. Whether or not this was due to an over-cautiousness on the part of Turrentine making the analyses last year I am unable to say, and will not be able to even formulate a definite opinion until I have all the material and have been able to study it carefully. This year the work is being done by two men who are checking each other, and so far the duplicates have run very close together, so there is no question but that the results they are getting are reliable.

I am sending you a memorandum of the results obtained from the samples collected by the Pacific Kelp Dulse Company. Unfortunately these

(c+a)

Crandall:--

samples had soured somewhat and were, moreover, very wet indeed. I suspect that the washing process which you mention in connection with their product is unnecessary and undesirable. You will see from these data that the potash content on the dry basis is very satisfactory indeed, but on the wet basis it is rather too low to make the product of any great commercial importance if the haulage and freight have to be paid over and above the costs of collecting, overhead charges, and a reasonable profit.

Inasmuch as you have been and are in direct contact with the Pacific Kelp Mulch Company, I deem it wiser for us to have our communication with them as far as possible through you, and you are authorized to use your own discretion in giving them the results of this examination of their product. My own feeling, with such light as I have, is that it would be wise for you to take this matter up with them. If they are not "on the level" we do not care anything about them and no great harm will be done; if, on the other hand, they are a decent crowd, in earnest, we want to do what we can to help them. And in that even I would a great deal rather have you go over the situation with them before we pub-

(c+a)

Crandall:--

lish results in order that there can be no question about fair treatment later.

I trust you are considering carefully the possibility of going to Alaska next summer, and will let me know soon what your decision is to be.

Sincerely yours,

Frank A. Cameron

In Charge.

Enclosure

(o+a)

Crandall:--

high results in order that there can be no question about fair treatment later.

I trust you are considering seriously the possibility of going to Alaska next summer, and will let me know soon what your decision is to be.

Sincerely yours.

In Charge.

ADDRESS ALL COMMUNICATIONS TO
"CHIEF, BUREAU OF SOILS."

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS,
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c+a) Monday, November 25, 1912.

Captain W. C. Crandall,
Marine Biological Association,
San Diego, California,

Dear Crandall:--

Your letter of November 17 is at hand, but most of the points raised therein have been answered in my letter which in all probability crossed yours in the mails. I am sorry you were so crowded with work in getting out the report. The recast report is undoubtedly in your hands by this time. A few more results on potash from kelp have been handed in, showing that the results as a whole are going to run higher in potash than those obtained last year by Turrentine. I will not bother to send you the individual results, but will wait until I get them all together and see what they suggest in the way of comment. Meanwhile, I think it would be advisable for you to finish the draft of the report which you have and let us have it back so that I can push matters more rapidly at this end. I would like very much if you can manage it sometime in the near future for you to send me, collect at this end of course, or under frank if the

(c+a)

Crandall:--

weight is not over 4 pounds, some complete samples of kelp; that is, the hold-fast, stipes and fronds, so that they can be soaked in water here and mounted. We have quite a number of demands for these samples for museum purposes, and a few of these it seems desirable to meet if we can.

I trust you are going to be able to take one of the Alaska parties next spring, and will see your way to do this before long and advise me.

Sincerely yours,

Frank K. Cameron

In Charge.

ADDRESS ALL COMMUNICATIONS TO
"CHIEF, BUREAU OF SOILS."

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS,
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.
(c+a)

Thursday, December 5, 1912.

Captain W. C. Crandall,
3468 3rd Street,
San Diego, California,

Dear Crandall:-

I am sending you herewith a memorandum of the potash results on the samples of kelp sent in from your preliminary trip. The analyses of the samples from Point Conception north, including those of Rigg, will average about 18 per cent potash, corresponding to a potassium chloride content of 27 to 30 per cent, three quarters or more of the soluble salts being potassium chloride. This is satisfactory indeed and shows on the whole more potash than Turrentine's results of last year. But you will observe that with these 9 samples from the south, the potash content is in the neighborhood of 7 per cent only, and the soluble salts content is also very low, less than half of what might ordinarily be expected from the other ~~work~~ samples. I can see no explanation of this state of affairs from reading over the report and am wondering if you have any observations which will help explain the matter.

(c+a)

Crandall:--

It would look very badly indeed for the southern kelps, especially for the Mexican kelps, if it were not for the fact that the 5 samples from La Jolla are also extremely low, whereas the average of samples from the same place gathered a year ago show more than twice as much potash. I have been over the analytical work with the men who made the analyses, Lindemuth and Parker, and it seems to be all correct and these are accurate determinations. But the thing is a bit startling and bothersome to this extent at least, that it calls for an explanation and we have not any satisfactory one to offer, and will be obliged to put up something in the nature of a defensive argument.

A few ~~weeks~~ days since I received from you a package containing young tips of Macrocystis plants. I am glad to have them, but as no letter has been received from you I am wondering just what purpose you had in sending them, and would be obliged if you would enlighten me. We will have all the analytical work, except the nitrogen determinations, fin-

(c+a)

Crandall:-

ished by tomorrow evening. The nitrogens we will not be able to get for a fortnight, but we can say that the report is practically ready, or will be ready by the end of this week, excepting the maps. The Mexican maps are being redrawn to put them on the same scale with the maps of the American coast, and the same thing is being done with the Puget Sound maps, so that the whole will be on a uniform scale, and I think we can promise ourselves a most interesting and useful publication when we finally succeed in getting it out.

I hope you have been thinking over the Alaska trip and will be able to tell me shortly that you see your way clear to go. In any event it would be desirable to come to a decision before long, although there is really no hurry about the matter until our appropriation bill has gone through the House, by which time we will know positively what money to anticipate for the coming year. So far as I know there is no reason to doubt that the funds will be ample for our plans.

Sincerely yours,

Frank H. Cameron

In Charge.

Encl.

ADDRESS ALL COMMUNICATIONS TO
"CHIEF, BUREAU OF SOILS."

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS,
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c+a) Monday, December 9, 1912.

Captain W. C. Crandall,
3468 3rd Street,
San Diego, California,

Dear Crandall:-

Replying to your letter of December 1, regarding the Alaska trip; the idea that I have been working on is that you would enter the service of the Bureau as a temporary employee for 6 months, or thereabouts, beginning May 1, at a salary of $200 per month; that you make your preliminary plans as far as possible before the first of May, and that as soon after the first of May as practicable you should leave for Alaska and map as much as possible. The time for stopping the field work is a matter which would have to be left to your discretion. I have been assuming that this would probably be near the middle or last of August, which would give you time to return to San Diego early in September, and would give you ample time thereafter to work up your reports and material and send them in in good shape.

I think it not at all unlikely that you

(c+a)

Crandall:--

would have to employ a somewhat larger boat than the one you used last summer, and of course the cost would be higher. On the other hand, the cost of boats in Alaska, judging from such data as has come to us, would not be as high as in the neighborhood of San Diego or San Francisco. Nevertheless, I have no doubt that we will have ample means to support the boat.

There is the other possibility that when you go to Alaska you will find that you will not want to get a large boat for any length of time, as you may be able to go from point to point and be able to utilizer smaller launches. I am inclined to think, however, that you will want a larger boat and to have a man to assist you in the scientific work, though I have not attempted to go into details very thoroughly, as I want to be sure of your taking charge of the party before doing so. Of course if you should not find it possible to go, I should try to make arrangements with someone else, and in that event would probably want to modify the plans, as we would hesitate to give as complete freedom to a

(c+a)

Crandall+++

man who had not previously worked for us as we are disposed to arrange for you.

Details as to where you should start and in which direction to work we will have to consider more carefully, and I am not yet sure which would be best in this matter and should want your advice after you had secured as much information as you could from your sea-faring acquaintances. I should of course again consult our friends in the Fish Commission here, and with the data we could get together between us, I think we could come to a fairly good judgment.

As far as Rigg's party is concerned, there seems to be no doubt that the thing for him to do is to start in at Kodiak and work westward along the peninsula.

Let me know about these matters as soon as you conveniently can.

I am looking for the corrected manuscript, but it has not yet shown up.

Sincerely yours,

Frank N. Cameron

In Charge.

Corrected MS arrived since above was dictated

ADDRESS ALL COMMUNICATIONS TO
"CHIEF, BUREAU OF SOILS."

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF SOILS,
WASHINGTON, D. C.

PHYSICAL AND CHEMICAL INVESTIGATIONS.

(c+a) Tuesday, December 10, 1912.

Captain W. C. Crandall,
3468 3rd Street,
San Diego, California,

Dear Crandall:-

I have just received your letter of the 2nd instant, and am glad things are looking up with you both scientifically and financially.

Dr. Fry of the University of Washington is very anxious to get into the kelp business and he has been strongly urged upon me for command of one of our parties next spring, but I have been holding off anticipating that you would be available. Naturally I should much prefer to have you on account of your experience and our past associations. I will for the present hold the matter open, but hope that just as soon as you know definitely what you are going to do that you will advise me. There is yet plenty of time, but the selection and employment of a boat and arrangement of a party is a time consuming operation, as you well know. I think it would be wise to have at least two scientific men for each party next year,

(Ca)

Crandall:-

as the more I look into the coast of Alaska and the possibilities there, the bigger the undertaking appears, and from now until the 1st of May is not much toolong to be arranging plans.

With best wishes,

Sincerely,

Frank H. Cameron

In Charge.

G. M. BERNSTEIN
BROKER

CANANEA, SONORA, MEXICO.

Mexico City, D.F.
December 10th. 1912.

Capt. W. C. Crandall,
3468 Third Street,
San Diego, California.

Dear Mr Crandall:-

I suppose you will be surprised in hearing from me after such a long while and to learn that I am here. I arrived in the city about three weeks ago, and have been busy attending to some small details regarding my kelp concession. These I have completed and will soon return to Sonora to continue my work with my undertaking.

It had been my desire of writing to you before this to thank you for the many courtesies that you showed me during my stay in Cali = fornia, but some way or other, had been prevented from doing so. I am now doing it, and wish to assure you of my desire of reciprocating in the near future the favors that you dispensed me.

No doubt by this time you have submitted to the Department your Report on the Kelp Groves. I would very much like to get a line on the result of your investigations and I am asking you to kindly advise me if you know how soon it will be given out to the public as I want to have my application promptly before the Department for a copy. Also to know any thing that you may be in position to state regarding the future of Kelp as a fertilizer, as I am greatly interest ed in knowing what is being done about the matter.

I thank you in advance for any information that you may give me about the affair and if I can be of any service to you at any time do not hesitate to command me.

Hoping to be favored with your advises and wishing you the best of health, with the compliments of the season, I am
very truly yours,

G. M. Bernstein

Officers and Directors
R. A. GUTHRIE, President
J. M. SHINER, Sec-Treas.
E. C. SHINER, Vice-Pres. Traffic Mgr.
H. L. DIETCHER, Factory Supt.
JOHN F. POOL
E. W. KAPP
C. C. CURTIS, M. D.

PHONE MAIN 8430

Pacific Kelp Mulch Co.

INCORPORATED

MANUFACTURERS OF

Kelp Mulch and Kelp Products

Factory, Warehouse and Wharfage
TERMINAL ISLAND

General Offices
335-36 Union Oil Building
LOS ANGELES, CAL.

Los Angeles, Cal., Dec 11th 12 191

MR. W. C. CRANDALL

SAN DIEGO, CALIF.

DEAR FRIEND, MR. C. :-Your letter of the 1 st inst to hand and I wish to thank you for same, which is surely a big boost for us as some of the fertilizer salesmen are reporting around the country that the kelp in the green state runs five per cent chlorine.

Just received a letter from Mr Cameron in which he states that within the next few months his department will have several publications ready for the public, and that these reports will be by no means detrimental to the use of kelp as a fertilizer.

We are shiping regularly and makeing improvements rapidly, we expect to commence the construction of a new submarine harvester in the near future, which will be along different lines from the one we are now operationg.

Again thanking you for valueable information and wishing you the compliments of the season, I remain,

RESP'T. YOURS,

J. M. Shiner

Officers and Directors
R. A. GUTHRIE, President
J. M. SHINER, Sec-Treas.
E. C. SHINER, Vice-Pres. Traffic Mgr.
H. L. DIETCHER, Factory Supt.
JOHN F. POOL
E. W. KAPP
C. C. CURTIS, M. D.

PHONE MAIN 8430

Pacific Kelp Mulch Co.

INCORPORATED

MANUFACTURERS OF

Kelp Mulch and Kelp Products

Factory, Warehouse and Wharfage
TERMINAL ISLAND

General Offices
335-36 Union Oil Building
LOS ANGELES, CAL.

Los Angeles, Cal., Feby 18, 1913. 191

Mr. W. C. Crandall,

SanDiego, Cal.

Dear Mr. Crandall:-

Yours of yesterday to J. M. Shiner, received. J. M. Is now in Mexico putting in a kelp drying plant preparatory to our putting out the kelp in bales, bags and cartons. This will enable us to serve a much more extended territory. Our bags and cartons of dried and ground kelp will be pushed for gardens, lawns, etc. and baled product used for orchards and beet lands. We will be able, as we now figure to sell the baled kelp for its actual analysis in nitrogen, phosphate and potash at states valuation, which will effect a saving of 25% to the grower in the cost of his commercial plant food, where he has been using any of the mixed fertilizers, and give him his mulch. Joe is the draftsman and I am afraid I would not be able to make a draft of the cutting sufficiently detailed and accurate to meet your requirements. If you desire to come up and take additional pictures, we will be glad to lend you any assistance possible.

The reason for our establishment of drying plant in Mexico is on account of weather conditions, labor cost and the fact that through others we have certain facilities and rights xxx that make this move seem highly feasible.

Yours truly,

PACIFIC KELP MULCH CO,

J. M. Shiner